

IUBMB Enzyme Nomenclature

EC 2.3.2.12

Common name: peptidyltransferase

Reaction: $\text{peptidyl-tRNA}_1 + \text{aminoacyl-tRNA}_2 = \text{tRNA}_1 + \text{peptidyl-aminoacyl-tRNA}_2$

Other name(s): transpeptidase; ribosomal peptidyltransferase

Systematic name: peptidyl-tRNA:aminoacyl-tRNA *N*-peptidyltransferase

Comments: An enzyme found in ribosomes.

Links to other databases: [BRENDA](#), [EXPASY](#), [KEGG](#), [ERGO](#), CAS registry number: 9059-29-4

References:

1. Rychlik, I. Release of lysine peptides by puromycin from polylysyl-transfer ribonucleic acid in the presence of ribosomes. *Biochim. Biophys. Acta* 114 (1966) 425-427. [Medline UI: [66165526](#)]
2. Rychlik, I., Cerná, J., Chládek, S., Zemlicka, J. and Haladová, Z. Substrate specificity of ribosomal peptidyl transferase: 2'(3')-*O*-aminoacyl nucleosides as acceptors of the peptide chain on the amino acid site. *J. Mol. Biol.* 43 (1969) 13-24. [Medline UI: [69291460](#)]
3. Traut, R.R. and Monro, R.E. The puromycin reaction and its relation to protein synthesis. *J. Mol. Biol.* 10 (1964) 63-72.

[EC 2.3.2.12 created 1976]

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SRNT

09/625,790 Search Strategy

(FILE 'HOME' ENTERED AT 13:12:01 ON 04 MAY 2004)

FILE 'STNGUIDE' ENTERED AT 13:12:11 ON 04 MAY 2004

FILE 'HOME' ENTERED AT 13:12:15 ON 04 MAY 2004

FILE 'MEDLINE, AGRICOLA, CAPLUS, BIOSIS, EMBASE, WPIDS' ENTERED AT
13:12:24 ON 04 MAY 2004

L1 17 S (SPARSOMYCIN OR ANISOMYCIN) (5A) ((HUMAN (W) IMMUNODEFIENCY (
L2 12 DUP REM L1 (5 DUPLICATES REMOVED)
L3 30 S (SPARSOMYCIN OR ANISOMYCIN) (10A) ((HUMAN (W) IMMUNODEFIENCY
L4 13 S L3 NOT L1
L5 7 DUP REM L4 (6 DUPLICATES REMOVED)
L6 186 S (ANISOMYCIN OR SPARSOMYCIN) AND (PEPTIDYL (W) TRANSFERASE)
L7 145 S L6 AND INHIBIT?
L8 75 DUP REM L7 (70 DUPLICATES REMOVED)
L9 54 S (ANISOMYCIN OR SPARSOMYCIN) (5A) (PEPTIDYL (W) TRANSFERASE)
L10 30 DUP REM L9 (24 DUPLICATES REMOVED)
L11 2 S L10 AND (VIRUS OR VIRAL)

FILE 'CAPLUS' ENTERED AT 13:28:19 ON 04 MAY 2004

E PELTZ S W/AU 25
L12 2 S (E3 OR E5 OR E6) AND (PEPTIDYL (W) TRANSFERASE)
E DINMAN J/AU 25
L13 3 S (E3 OR E4 OR E5 OR E6 OR E7) AND (PEPTIDYL (W) TRANSFERASE)
E CUI Y/AU 25
E CUI YI/AU 25
E CUI YIN/AU 25
L14 1 S (E8 OR E9 OR E10 OR E11 OR E12) AND (PEPTIDYL (W) TRANSFERASE

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